REMARKS/ARGUMENTS

Claim Status

Claims 1-8 are pending. Claim 1 is currently amended to include "wherein the particles have necks produced between the particles thereby forming a porous body which is electrically conductive" which find support in the specification: page 11, lines 10-12. Claim 8 is withdrawn pursuant to a previous Restriction Requirement. No new matter is believed to have been entered.

§103(a) Rejection

Claims 1-7 are rejected under 35 U.S.C. §103(a) as obvious in view of the combination of *Kimura* (US 5,945,369), *Hata* (US 6,068,828), *Utter* (US 5,819,652) and *Ishikawa* (US 6,521,671). Applicants respectfully traverse this rejection.

Applicants previously argued that "*Kimura's* catalysts do not disclose or suggest porous thick films having an electrical conductivity of at least 10^{-3} S/m at 800°C as claimed by Applicants. Furthermore, none of *Hata*, *Utter* or *Ishikawa*, alone or in combination, fulfill this deficiency of *Kimura*. Therefore, the combination of *Kimura*, *Hata*, *Utter* and *Ishikawa* does not disclose or suggest (i.e., render obvious) Applicants' claims." (see response filed on January 26, 2009, page 15).

In response to the above-mentioned argument, the Office asserts (1) "Applicant is reminded that the rejection of claim 1 was made using a combination of references" and (2) "Since the combination of references teaches all the steps recited in claim 1 (including sintering), the final porous thick film that is formed *must* also have an electrical conductivity of at least 10^{-3} S/m at 800°C." (Office Action, page 6 - emphasis added).

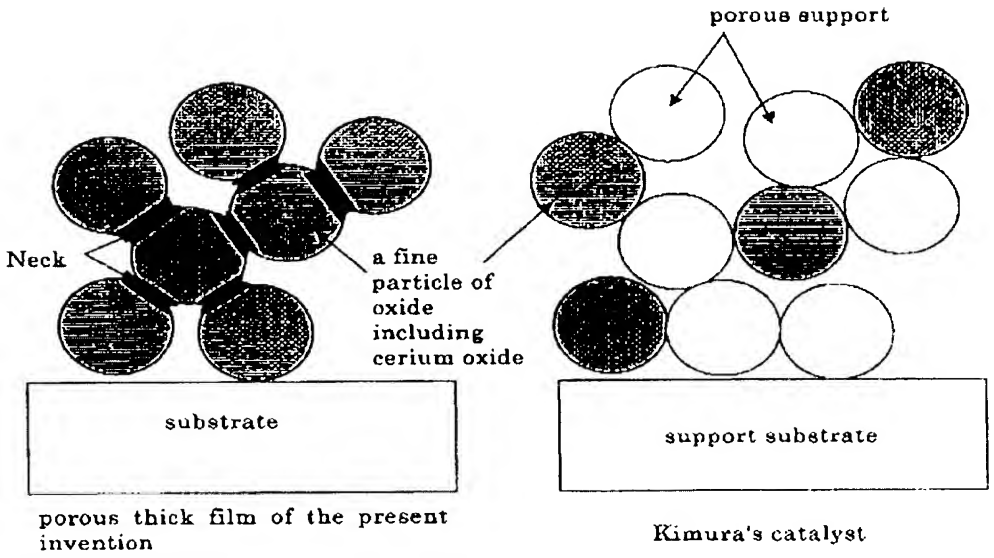
With respect to (1), Applicants note that the obviousness rejection was addressed as "a combination of references." Applicants remind the Office of Applicants' previous

argument where the combination of references was specifically addressed (see above quotation). Furthermore, the Office is reminded that *Kimura*, not the remaining references, is relied upon by the Office for its disclosure of a catalyst which is being equated/compared to Applicants' electrically conductive porous body.

Concerning (2), Applicants submit the following. The assertion by the Office that "the final porous thick film that is formed *must* also have an electrical conductivity of at least 10^{-3} S/m at 800°C" is an inherency based rejection. As such, Applicants point out that the Office has not met its burden of proof with respect to inherency according to M.P.E.P. 2112 (Part IV) which states:

> "The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. ... To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may *not* be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient."

Moreover, Applicants have already previously explained how/why the cited references do not have the claimed electrical conductivity, see response filed on January 26, 2009: "Electrical conductivity is important for oxygen partial pressure sensing components (e.g., porous thick films) of resistance-type oxygen sensors in air-fuel ratio feedback control systems that control the air-fuel ratio in the exhaust gas of automobiles. Thus, to obtain electrical conductivity of the porous thick film, mechanical contact between the oxide particles is required and a "neck" (see diagram below) is necessary at the point of contact between the oxide particles to give greater electrical conductivity and lower electrical resistance of the porous thick film."



As can be seen from the above diagram (previously included in the response filed on January 26, 2009), when Applicants' paste is sintered, necks are produced between the fine particles to form a porous body which is electrically conductive. It should also be noted here that Applicants' paste does not include porous support (see claim 1: "mixing the resulting oxide with an organic binder to obtain a paste"). In contrast, *Kimura's* catalyst comprises a mixture of fine particles and porous support formed on a support substrate wherein the amount of porous support is much greater than the amount of fine particles to prevent contact amongst the fine/oxide particles upon sintering so that the catalyst may function properly (see e.g., First Preferred Embodiment). Therefore, the electrical resistance of the porous support (i.e., alumina) of *Kimura* predominates, thereby resulting in an insulating catalyst with no electrical conductivity. Thus, upon sintering Applicants' paste one obtains an electrically conductive porous body; however, upon sintering *Kimura's* catalyst (according to the disclosure of *Hata*) one obtains an insulating material.

Accordingly, the Office's statement that "the final porous thick film that is formed *must* also have an electrical conductivity of at least 10^{-3} S/m at 800°C" is unfounded. Furthermore, not only does the combination of *Kimura's* catalyst with the methods of *Hata*,

Utter and *Ishikawa* not accomplish Applicants' method, but such a combination (which results in an insulating material) does not render obvious Applicants' method which results in an electrically conductive porous body.

Therefore, no combination of *Kimura*, *Hata*, *Utter* and *Ishikawa*, discloses or suggests a method for obtaining porous thick films having an electrical conductivity of at least 10^{-3} S/m at 800°C, wherein the fine/oxide particles have necks produced between the particles thereby forming a porous body which is electrically conductive, as claimed by Applicants. Thus, Applicants request withdrawal of this rejection.

Conclusion

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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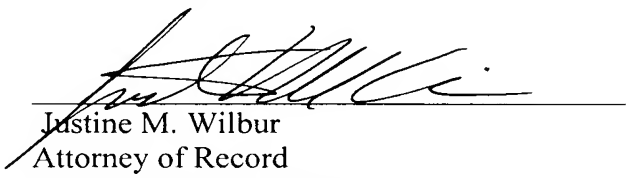
Norman F. Oblon



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